

REMARKS

Reconsideration of the subject application as currently amended is respectfully requested.

In the Non-Final Office Action dated September 18, 2008, the Examiner rejects claims 11-20. Claims 11-20 are currently pending and for at least the reasons discussed below, claims 11-20 are allowable in view of the prior art of record.

Briefly, the subject application pertains to a coiling device and a coiling method for long metal products obtained from drawing or rolling operations by guiding and containing the coiled product on a winding mandrel in order to form a desired external form.

More particularly, the subject application includes an inner plate 13 that can assume two opposite extreme positions, a first advanced position and a second retracted position. During the advanced position, the inner plate 13 has the initial step of clamping and winding the first spirals of metal wire 10 (see e.g., Figures 2, 3, 6, 7, 8 and 9). During the retracted position, the inner plate 13 has the initial step of winding the subsequent layers of spirals (see e.g., Figures 4, 5, 10 and 11). As such, the specific purpose of the movement of the inner plate 13 between the advanced position and the retracted position is to have all the spirals of the coil, including the first coiled spiral, to be inside two lateral plane

surfaces. This is advantageous because the layers of the coiled metal product 10 will be parallel with each other, without any spiral protruding outside.

Objection to the Specification

On page 3 of the present Office Action, the Examiner objects to the specification because references to the claims should not be in the specification.

In accordance with the Examiner's instructions, the phrase "as in claim 1" recited on page 5, lines 4-8, and "characteristics of claim 8" recited on page 5, line 9-11 of the specification as originally filed, has been amended to cancel these phrases from the specification.

Therefore, Applicants respectfully request the objection to the specification be withdrawn and reconsideration of the specification as amended.

Rejection under 35 U.S.C. § 102(b)

Claims 11, 12, 16 and 17 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,945,585 (hereinafter "Moslener"). Applicants respectfully traverse these rejections and submit that Moslener fails to anticipate each and every limitation recited in claims 11, 12, 16 and 17.

Independent claim 1 as amended recites, inter alia, "...wherein said containing element is axially movable with respect to said mandrel between a first position in which said leading end of said product is inserted and said annular channel is arranged in correspondence with said forming zone, and a second position for forming at least one subsequent spiral in which said coil of

product is completed and said annular channel is displaced from said forming zone, said containing element remaining in said first position temporarily and said second position being retracted with respect to said mandrel so that said annular channel is outside the space occupied by said coil during the completion of said coil, wherein said at least one subsequent spiral is parallel with said first spiral with no subsequent spirals protruding laterally with respect to said first spiral after completion of said coil.” Similarly, independent claim 18 has been amended to recite similar variants thereof.

In other words, the inner plate 13 is positioned in an advanced position at the start of the coiling of the first layer to define a narrow annular channel 14. In this advanced position, the first segment of the metal wire 10 is firmly clamped against the surface of the mandrel 12 (see e.g., Figures 3, 4 and 5). As such, the inner plate 13 is able to be positioned in the advanced position for maintaining the time required to fill the annular channel 14 with the first layer of the metal wire 10 (see e.g., page 13, lines 29 through page 14, lines 1-7).

Once the first layer is completed in the advanced position, the inner plate 13 moves in the retracted position, so that all the subsequent layers of the coil outside the annular channel 14 are perfectly aligned to the first layer that has been formed at the beginning of the advanced position inside the annular channel 14 (see e.g., Figures 4 and 5). As such, the second retracted position is provided to maintain the coiling of all the other layers of the coil in such a way that all the layers are aligned along a line perpendicular to the axis of the

mandrel 12 without any spirals protruding from the coil (see e.g., page 13, lines 29 through page 14, lines 1-7).

This is advantageous because an extremely compact cylindrical coil is obtained, with the faces plane and parallel without any spirals protruding out of place.

Contrary to the Examiner's assertion, Moslener fails to disclose the above limitations. More particularly, and as expressly disclosed in Col. 4, Lines 45-52, of Moslener, "...at least the forward extremity of the outer sleeve 6a **projects slightly beyond the abutment surface 18, even in a retracted position of the outer sleeve. This tends to isolate and protect the first one or two convolutions of the coil, during the subsequent portions of the winding operation,** so that these convolutions are in a known position and easily accessible in the wound coil."

Simply stated, Moslener discloses a guide-bell assembly 6 having an axially movable sleeve 6a that defines a channel in which the first spiral of the coil are clamped, and thereafter, maintained in a position protruding from other subsequent spirals at the end of the coiling. Moslener further discloses that even in the retracted position, the sleeve 6a projects slightly beyond the abutment surface 18. As such, the inner face of the coil comprises adjacent spirals which follow the curved bell shape of the bell-guide assembly 6, as illustrated in Figure 1 of Moslener.

However, the technique of winding the coil product and the cylindrical coil obtained at the end of the coiling operation of the subject application are patentably distinct from Moslener.

More specifically, and as illustrated in Figure 12, the cylindrical coil which is obtained at the end of the coiling operation formed by the coiling device of the subject application has all the spirals of the product advantageously parallel with one another without any spirals protruding outside. This is accomplished by the coiling device of the subject application by the movement of the inner plate in a first advanced position, and thereafter, a second retracted position. As such, independent claim 11 claims that an axially movable plate defines an annular channel just for the first spirals, and thereafter, moves to a retracted second position to allow subsequent spirals of the coil product to be perfectly aligned to the first spirals. This advanced and retracted position provides a coil with two planes and parallel faces at the end of the coiling cycle.

By contrast, Figure 1 of Moslener illustrates the coil that is obtained at the end of the coiling operation to have a curved bell shape. This curved bell shape of the coiling product obtained at the end of the coiling operation of Moslener is due to the forward extremity of the outer sleeve 6a that projects slightly beyond the abutment surface 18, even in a retracted position. As such, the inner face of the coil comprises adjacent spirals which follow the curved shape of the bell-guide assembly 6, as illustrated in Figure 1 of Moslener.

Thus, the Moslener reference discloses a completely different technique of winding with respect to that disclosed in the present application and therefore fails to anticipate the above limitations recited in independent claim 11.

Rejection under 35 U.S.C. § 103(a)

Claims 13, 18 and 19 are rejected under 35 U.S.C. §103(a) as being obvious over U.S. Moslener, in view of U.S. Patent No. 6,318,660 (hereinafter “Bordignon”).

Claim 13 and claims 18 and 19 depend on independent claims 11 and 18 respectively, and therefore, includes all the limitations of their respective base claims. Thus, for at least the reasons discussed above, Moslener, alone or in combination with Bordignon, also fails to teach or suggest claims 13, 18 and 19.

Claims 14 and 15 are rejected under 35 U.S.C. §103(a) as being obvious over Moslener, in view of GB-1367513 (hereinafter “Kogos”).


Claims 14 and 15 depends on independent claim 11, and therefore, includes all the limitations of their respective base claims. Thus, for at least the reasons discussed above, Moslener, alone or in combination with Kogos, also fails to teach or suggest claims 14 and 15.

Claim 20 is rejected under 35 U.S.C. §103(a) as being obvious over U.S. Moslener, in view of Bordignon, and further in view of Kogos.

Claim 20 depends on independent claim 18, and therefore, includes all the limitations of their respective base claims. Thus, for at least the reasons discussed above, Moslener, alone or in combination with Bordignon or Kogos, also fails to teach or suggest claim 20.

To expedite prosecution of this application to allowance, the examiner is invited to call the Applicants' undersigned representative to discuss any issues relating to this application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'T. Weisz', is written over a horizontal line.

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